19. State and explain soldering tools and techniques in the production of PCB.

20. Reveal the automation of the design process of printed circuit boards.

———————

APRIL/MAY 2025

23USEL33 — PCB DESIGN AND FABRICATION (SEC IV)

Time : Three hours Maximum : 75 marks

SECTION A — (10 × 2 = 20 marks)

Answer ALL questions.

Shanmuga Industries Arts & Science College T.V.Malai

1. Give the uses of PCB.

2. What is the function of capacitor?

3. List out any two general artwork rules in layout design.

4. Give the details of spacing in PCB layout.

5. State the types of lamination?

6. What is the meaning of wet film resist in PCB?

7. What is PCB etching?

8. Why do we need a soldering?

9. What is CAD?

10. Why cross talk happens?

SECTION B — (5 × 5 = 25 marks)

Answer ALL questions.

11. (a) Briefly explain plated through hole technology.

Or

(b) What are the limitations of surface mount technology (SMT)?

12. (a) State the general layout rules for PCB design.

Or

(b) Explain the function of passive components.

13. (a) Write short note on dry film resist.

Or

(b) Briefly explain the properties of lamination in the manufacturing of PCB.

14. (a) What are the basic principles of soldering connection?

Or

(b) Explain the steps involved in soldering process.

15. (a) Write a short note on ground line noise.

Or

(b) Briefly explain the advantages of automation in PCB assembly.

SECTION C — (3 × 10 = 30 marks)

Answer any THREE questions.

16. Describe the PCB surface mount components in detail with diagram.

17. Explain components placing and mounting in PCB layout.

18. Elucidate the basic printing process for double sided PCB's.